GrummanWorld

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Frequent Flier. *The X-29 foward swept wing aircraft flies over Edwards Air Force Base in California. With NASA pilot Rogers Smith at the controls, the advanced technology demonstrator successfully completed its 200th flight on June 8.*

X-29 Takes Its 200th Flight

EDWARDS A.F.B., Calif. — The Grumman X-29 advanced technology demonstrator aircraft completed its 200th flight on June 8, with NASA pilot Rogers Smith at the controls.

The first flight of the X-29 took place in December of 1984. For the past year, the plane has been flown three or four times on each flight day. It has achieved a top speed of Mach 1.5 and altitude of 50,000 feet.

The X-29 was developed to demonstrate a number of critical new technologies in addition to the most obvious: its forward-swept wings.

Among these are: an all-digital fly-by-wire system that adjusts the control surfaces up to 40 times a second; variable camber, which allows a change in the curvature of the wing; and aeroelastically tailored composite wings.

"Tests of the first X-29 will conclude sometime this year," says Bill Mebes, program director. "The second X-29 is tentatively scheduled to be delivered to Edwards in November. Its first test flight is slated for early 1989."

These test flights will investigate the X-29's characteristics at high angles of attack. This term refers to the attitude of the aircraft relative to the direction of flight.

A spin-recovery chute and instrumentation suite are being added to aircraft No. 2 in Bethpage. In addition, the flight control software is being modified, so the on-board computers can maintain control at the high angles.

GQ
Means Grumman Quality

GQ — Grumman's tickertape symbol — is being used in a newly designed logo for the Grumman Total Quality Process. What is the Grumman Total Quality Process? See page 4.

Updated Mohawk Debuts At Stuart Operations, Fla.

STUART, Florida, June 24, 1988 — Major Gen. Ellis Parker called them "Mohawkers": people who build and fly the Grumman OV-1 Mohawks. Nearly 200 Mohawkers, including half a dozen former Army OV-1 program managers, gathered here today for the rollout of the latest version of this surveillance and intelligence-gathering aircraft.

At the ceremony, Grumman Aircraft Systems Division showed off its Multistage Improvement Program (MIP) OV-1 Mohawk prototype. It has a toughened airframe and new cockpit electronics, navigation and communications equipment. The modifications make it easier to operate and maintain, as well as more reliable and survivable. In the future, MIP Mohawks are also expected to get more powerful engines.

"When we're outnumbered, the centerpiece of winning is to have superior intelligence: knowing where the enemy is, what he's doing," said Gen. Parker, commander of the Army Aviation Center and a veteran Mohawk pilot. "The Mohawk has been doing that for us for 30 years."

Parker called today's soldier the finest and best trained he has ever seen. But "we must have the technology to bring that to bear. You see an example of that behind me," said Parker of the new Mohawk.

Aircraft Systems President Pete Oram said the MIP Mohawk appears similar to previous versions, "but internally it contains many improvements."

The MIP Mohawk is the fifth upgrade for this aircraft, which was first delivered in 1960. Production ended in 1970, but 110 of the 380 built were recycled through Stuart for various upgrades and system enhancements.

For the Multistage Improvement Program the veteran airframe was put through a life extension program. State-of-the art avionics included a multifunction display system for the cockpit, new communications and navigation equipment.

"This product represents significant investments by the Army and industry in time, money and people," said Oram.

The prototype has already completed nine test flights here and, in August, will go north to Calverton for a flight test program that will continue through December. The production contract is being considered for Fiscal Year 1989.■

The Inside Story. *Maj. Gen. Ellis Parker (2nd from L), the Army Aviation Center commander and the most experienced Mohawk flier on active duty, gets a look at the new cockpit displays in the Multistage Improvement Program Mohawk from Grumman test pilot Bob Ward (L) and Stuart's chief test Chris Wold (3rd from L). (Photo by Jim Ferris)*

Space Systems To Help Build Nuclear Accelerator

Grumman Space Systems and the Los Alamos National Laboratory in New Mexico sign three-year contract

Grumman Space Systems and the Los Alamos National Laboratory in New Mexico have signed a three-year, $16 million contract, with an option for renewal, to jointly develop a ground test accelerator (GTA). This is a key component of the Strategic Defense Initiative.

The accelerator will be housed in a 67,700 square-foot building now under construction. The accelerator will generate powerful neutral particle beams. The GTA will be used to develop space-based particle beam systems able to discriminate between missile-launched warheads and decoys. If powerful enough, the beams could also be used to destroy missile boosters and warheads.

Twelve Grummanites are working on the project at Los Alamos. They are working in a new office building attached to the GTA building. Eventually, the Grumman team there will grow to 22 people; another 22 Grumman scientists and engineers will work on the project on Long Island.

The accelerator will be used in conjunction with the Boost Surveillance and Tracking System, which Grumman is competing to produce. The two systems will detect intercontinental ballistic missiles as they are launched, track them and single out the warheads from the decoys.

"Without the neutral particle beam you cannot fully assess the reentry vehicle threat that you are facing," says Tony Favale, the deputy director of Space Systems' Energy Systems group.

There is an urgency to get neutral particle beam developments into the hands of the industries that will build the Strategic Defense Initiative hardware. So, Los Alamos wanted to bring in an industrial partner from the beginning. It started looking for one over a year ago.

"We were looking for a high-quality technical partner with in-depth scientific management expertise and experience in neutral particle beams or closely related technologies," said John Passarelli of the Lab's Research and Development Contracts group.

According to Los Alamos, seventeen companies initially showed interest in the program, but only Grumman and McDonnell Douglas Astronautics Co. submitted proposals.

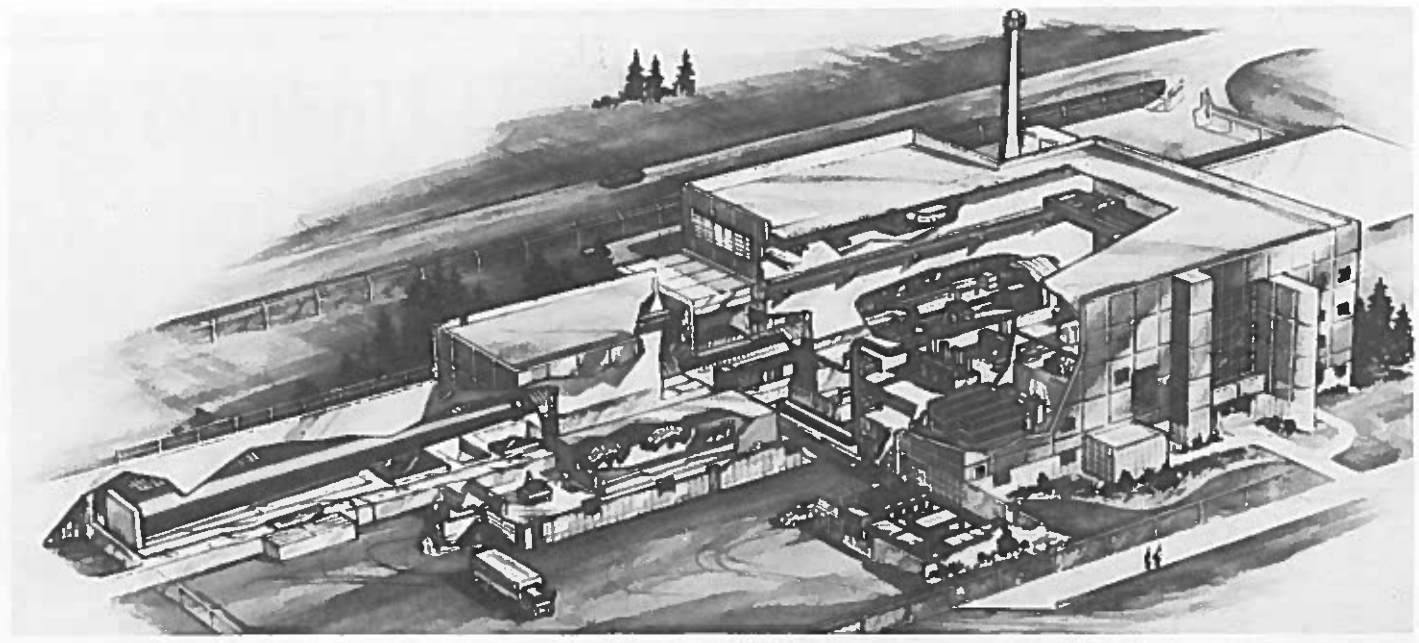
"This activity grew out of work done by our fusion and research groups," says Favale, who is also a director in Corporate Research. "It takes in all our vacuum and cryogenic research work, our engineering capabilities and our RF (radio frequency) expertise, because this is an RF machine."

"The scientific innovation and cross-fertilization of ideas will yield many technological benefits, not only for SDI, but for later applications in private industry," says John Erickson, who recently moved to Los Alamos to serve as Grumman's program manager.

Favale agrees. "The spin-offs are already here. Research is being done in Loma Linda, California, that will utilize the technology from the Beam Experiment Aboard Rocket (BEAR) experiment to develop a nuclear particle beam for cancer treatment. Also, the FAA is investigating the use of accelerators to look for explosives in luggage."

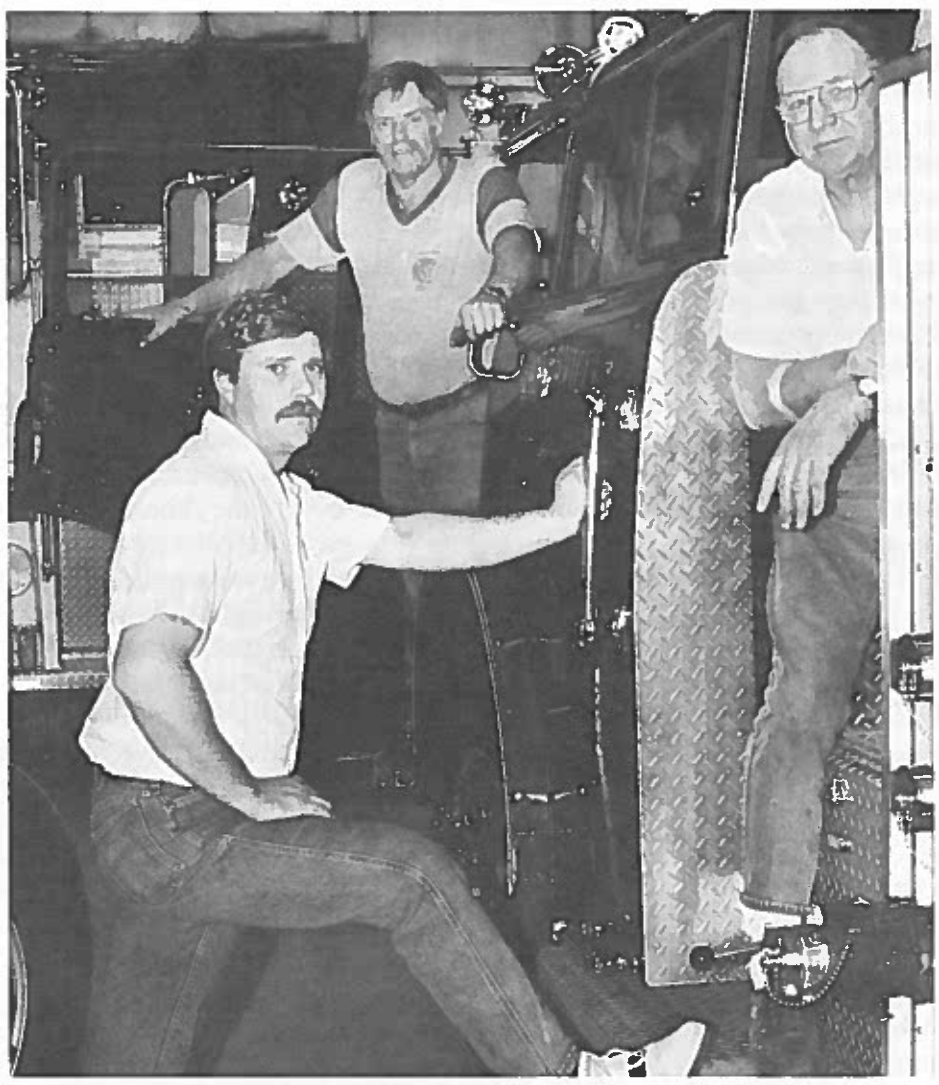
Grumman is working on the BEAR program. This experiment, slated for a 1989 launch, uses a unique accelerator that Grumman recently delivered to Los Alamos. The accelerator will be carried for a short trip into near space by an ARIES rocket to see how well it works in space after taking the bumps and jolts of a rocket launch.

These and related programs now being worked on by Grumman are the major neutral particle beam efforts under way, says Favale. They amount to over $77 million in contracts signed this year and will grow in importance over the next several years.■



Off The Drawing Board. *Construction is under way on the Ground Test Accelerator at the Los Alamos National Laboratory in New Mexico. The Space Systems Division is under contract to help develop it. A dozen Grummanites are working there now.*

Shining Nose Cap. *At Stuart Operations in Florida, Grummanite Brad Pawlak prepares the nose cap of a nacelle for polishing. It takes seven hours to polish the nose cap using sandpaper and oil. The sandpaper grain ranges from 120 to 1,200 during the process. (Photo by Jim Ferris)*



Ladders Aweigh. *Rick Thornhill (L), Harley Hawkins, and Jay Mundy (R) prepped these trucks for domestic destinations. They have delivered trucks to 13 foreign countries, too.*

Around The World In A Grumman Fire Truck

The Grummanites who deliver fire apparatus abroad usually face problems such as language barriers and shortages of spare parts. However, on a trip to Ecuador, Grummanite Jay Mundy had to deal with a mob of angry hijackers.

Mundy was taking a shiny new Grumman FireCat to Quito, Ecuador's capital. Passing through the village of Choney, he ran into trouble.

"The village's mayor had promised the townspeople a new fire truck," says Mundy. "When they saw me driving through, they thought the FireCat was theirs. So they hijacked it to the local fire department. The government in Quito had to negotiate with them to get it back, and soldiers had to be brought in to protect me and our sales rep."

Two days later, Mundy and the rep resumed their journey. A month later, Mundy delivered Choney's own truck.

Mundy, Harley Hawkins, and Rick Thornhill are Grumman Emergency Products' crew of delivery engineers. These three longtime Grummanites go abroad to deliver trucks, train customers, help finish building trucks, and troubleshoot problems. Grumman's other foreign customers have included Mexico, Argentina, Colombia, Peru, Surinam, Saudi Arabia, Jamaica, Trinidad, Chile, Bermuda, Lebanon, and Indonesia.

Mundy is the senior member of the team: he has been in the fire-truck business since 1941. "If we deliver a finished truck, one of us will usually go to the country for two to three weeks to train the firefighters," says Mundy. "We've all delivered trucks to Mexico — one time, nine trucks in two weeks all over the country."

Mundy advises his team to err on the side of caution wherever they travel.

"For instance, you can't bring alcoholic beverages into Saudi Arabia. You aren't supposed to speak to women on the street," he says.

The delivery engineers also make follow-up visits, to assist the fire departments with any equipment problems they are having. Usually, any troubles that crop up are from easily corrected maintenance mistakes.

"Tools such as drills and welding equipment are hard to come by," says Hawkins. "These countries have a lot of raw materials, but it's hard to find parts like pipe fittings, tubes, and gauges."

"In Lima, we had to fix two broken ladders — a fireman had backed the truck into a building," says Mundy. "Luckily, the dealer arranged for us to use equipment at a Volvo factory."

When not overseas, the three men prepare and deliver trucks in the U.S. They also are consulted on foreign proposal work. They know first-hand what features a foreign fire department requires — and which are unnecessary frills.■

New York Limits Length Of Hospitalization Coverage

If you have ever spent time in a hospital, or plan to, read on. New York State has adopted a regulation that may determine how much money you owe the hospital when you are discharged.

The new regulation is known as the diagnosis-related group rule. Before 1988, New York hospitals were reimbursed on a per diem or per service basis. This did not take into account the patient's diagnosis, but paid a set cost per day of hospital confinement, plus services.

Effective January 1, upon discharge, reimbursement will be based on the patient's diagnosis. The rule sets a minimum and maximum number of hospital days for that diagnosis. A hospital receives the same payment whether the patient is discharged after two days or after five days.

A patient has the right to request a review of the discharge determination. If that review determines that the patient can be discharged, and the patient chooses to stay in the hospital, he or she will be financially responsible for the continued stay.

"New York State is trying to control the amounts hospitals get reimbursed, and make sure people aren't being kept too long," says Mary Kaye Cronin, manager of Insurance Benefits. "There are enough checks built in to ensure people are not going to be discharged too soon."

Two years ago, the Federal government adopted the diagnosis related group rule for the Medicare program. New Jersey and Connecticut are other states to adopt such regulations. The three other states with substantial numbers of Grummanites — California, Florida, and Texas — have no such rules.

"There are 'trim points' for each diagnosis — a minimum and maximum number of days," explains Cronin. "If you stay in the hospital a length of time anywhere within that period, the hospital will be reimbursed a flat rate. These time limits are broad; it is rare for a diagnosis to fall outside the limit."

Problems associated with the diagnosis related group legislation illustrate how a call to the Grumman/Travelers Patient Advocate program can help you. Patient Advocate is a managed care program with a toll-free number. All Grumman/Travelers plan members must call it when they expect to be hospitalized.

By talking over your situation with one of the advocates, you may also prevent the hospital from discharging you prematurely. The advocates will work closely with hospital discharge review committees, as well as individuals' physicians.

For further information, contact Mary Kaye Cronin at (516) 575-1372.■

New Grumman Book On Sale

A new book — *One Of A Kind — The Story Of Grumman* — is now on sale at all Employee Services offices for $10.25. It was written by Bill Gunston.

This book traces the development of Grumman and its aircraft from the 1930s to the present. Grumman worked closely with the author and the publisher during the book's preparation and is able to offer *One Of A Kind* to employees at a discount.

The identical commercial version of the book titled *Grumman — Sixty Years Of Excellence* is being sold through bookstores throughout the country for nearly twice the price.

Obituaries

Russell B. Ives of Systems Development, Bethpage, Aircraft Systems Division, died June 7 at the age of 60. He had been with the company since 1981 and resided at 10 Carol Ct., Dix Hills, N.Y.

Personals

My family and I sincerely wish to thank all my friends, co-workers and ESO for their concern and many kind expressions of sympathy and support during the recent loss of my mother. **Vinny DeStefano**

The family of Ralph H. Tripp thanks you the Grumman family for your messages of sympathy. Your recollections and expressions of tribute at both memorial services and by letter have brought memories into sharp focus. We are grateful they have reminded us of how much the developing experiences at Grumman fulfilled our lives in unforgettable ways. You have helped us accept our loss. **LaVone Tripp and Daughters Virginia, Hallie, and Roberta**

Next Issue: July 22

What Is The Grumman Total Quality Process?

The new Grumman Total Quality Process has begun. It will change the way we approach our jobs. It will institute new ways of doing business. It will help us improve our products. It will make our jobs easier.

"The Total Quality Process is not a program devoted specifically to shop quality. It's a lot more than making sure we drill holes the right size," says Pete Oram, Aircraft Systems President. "Total Quality is for each and every Grummanite. It will eventually become a way of life at Grumman."

The Total Quality Process was officially launched when President John O'Brien and top senior management spent two days together hammering out the company's values and objectives several weeks ago. (See *Grumman World*, June 24, 1988)

On July 5 and 6, this senior management group attended the two-day Total Quality Process training session — the same training that many Grummanites will be taking in the future.

You can't direct somebody to do quality work. You have to give people the tools to do the job.

Grumman has hired the international management consulting and training firm of Organizational Dynamics Inc. (ODI). Its clients include many Fortune 500 companies, such as IBM, General Motors, Honeywell and AT&T. ODI tailors its program to each individual company's needs.

Nearly everyone agrees on the merits of improving quality, but most companies lack the tools to get the job done. The ODI training sessions provide those tools.

"You can't direct somebody to do quality work. You have to give people the tools to do the job," says Oram, who has gone through the training session twice — in May as a member of the Advisory Board and two weeks ago with his senior management team in Aircraft Systems.

"The Total Quality Process training is intense. At first, you're a bit of a 'Doubting Thomas.' You say to yourself, that's common sense. But the training sessions provide you with techniques and thought processes to do your job better. It gets you to apply the techniques to deal with real world problems."

During the training sessions, the groups work on real problems in their respective areas — not textbook problems.

Very often a problem is solved, but there is no mechanism in place to see that it stays solved. The Total Quality Process provides the mechanism to evaluate if the problem is really solved and that it stays solved.

Nothing is worse than getting people to come up with good ideas and then do nothing with them.

All the problems tackled by the Total Quality Process must have a quantitative base — where the results can be measured in dollars. "During the process, the group narrows an issue down to a point that we can say this is what the issue is, this is the cost of the problem, this is the solution and what it may cost and here's the net savings," says Oram. "It's very important to address problems that are specific. How much does that problem cost us? When you approach it that way, it's not emotional. It's in black and white."

He believes that a quantitative approach will keep people from using the Total Quality Process groups to find solutions for their pet peeves. "Everybody always wants to solve the problem that's in someone else's backyard, not their own. It doesn't cause you any discomfort that way."

Task teams using the Total Quality Process will be assigned specific problems. When they arrive at a solution, they go to a formal committee to get it reviewed and approved. "Nothing is worse than getting people to come up with good ideas and then do nothing with them," says Oram. In Aircraft Systems, the head of that steering committee is Norm Reinertsen, vice president-Quality Operations. In Data Systems, it's Tom McKessey, senior vice president-Information Services and Operations. Other divisions will name their respective steering committee heads in the near future.

Two weeks ago, Data Systems President Bob Myers and his senior management group attended the two-day training session.

They decided to tackle two problems that they felt significantly affected their division. One problem is the length of time it takes to get a purchase order processed — and that the purchase order clearly states the requirements of the buyer; the other is the length of time it takes to hire somebody.

"The Total Quality Process philosophy is simple: striving to do the right things right the first time," adds Myers. "You must continually look at your operations to see what you can do better.

"The time is right for this," says Myers. "While we don't have any major problems with our service or products, we admit that problems in administrative procedures have slowed down our ability to get the job done.

"Our quality action teams will attack a problem, and come up with a long term solution," he says. "Sometimes, you come up with an instant solution that tends to be a band-aid fix. With Total Quality Process, you are trying to prevent that problem from ever happening again.

The Total Quality Process philosophy is simple: striving to do the right things right the first time.

"Once you get get started, the Total Quality Process never stops," says Oram. "Some of the big problems are very easy to see. The next level of problems may not be so easy to spot. We're already discovering that task teams will have to address the way we fundamentally do work. When this process filters throughout the company, we'll begin to work smarter, better, cheaper, and faster."

The biggest obstacle is people. "All of us resist change; we are comfortable," says Oram. "It's threatening to say 'let's change the way we do it, let's change the organization.' But we must. We are in a very

First Of Many. *The first group to participate in the Total Quality Process was the Advisory Board including (above) Vice President Dean Cassell (L) and Aircraft Systems President Pete Oram; and (at right) Grumman Vice President Sandy Jones (L) and Corporate Services Vice President Jake Busssolini.*

intense, competitive business. The level of competition will only become more intense in the future."

Three qualities affect everything we do: quality of work, quality of work life, and quality of management. Quality of work is generally what most people consider the quality issue: do our products fully meet our customer's needs?

But, there are other aspects of quality equally important: quality of work life and quality of management. How do people feel about their jobs and the people they work with? How can management improve the system?

"If we go through the total quality process in a serious way, it should have a major beneficial affect on all three aspects of quality," says Oram.

"People have to believe that it is worthwhile. You have to set the stage so people can do quality work. For instance, if the drawings are right then the guys can build it right. If you give them wrong drawings, then there is nothing they can do but build it wrong.

"Efforts in the past have sometimes failed because people believe that they are being singled out. With Total Quality Process, all Grumman people must get involved — from the chief executive officer on down. People must say to themselves, 'What I'm doing is important.' Everybody takes something from somebody, adds his 'value' to it, then gives it to somebody else. The next person along the line suffers if my job is not right."

Sometimes, it's difficult to consider the person who receives your work as your customer. "Many people never deal directly with the Navy," says Oram. "They don't consider the next person in the chain as a customer. They say, that's not a customer, that's old Joe — I've known him for years. Attitude changes are very tough, unless people work at it and give it a chance to work."

Oram sees some very visible changes occurring this year as a result of Total Quality Process, but the overall impact will take time. "It's going to take time to seep into the company consciousness.

"Everybody occasionally lets work go by that he or she knows is substandard. It's part of human nature, unfortunately," he says. "That kind of problem exists everyplace. It's very tough to measure because many people's work is not very visible. It's not like the guy who paints the red line on the side of the airplane. His work product is very visible."

As in any large organization, there are many things done because that's the way they've always been done. "There are plenty of examples," says Oram. "Some memos are repetitive. They always have the same information on them. Yet the date is changed and that same memo is freshly typed and mailed out. There's got to be a simpler way to get information."

What about the distribution lists for memos? "A lot of times, the people on these lists have been retired for years. Just think of the costs involved in processing all that paper," adds Oram.

One more example: When people move to a new office and take their telephone number with them, it costs the company $1,000. If they are issued a new telephone number, it only costs $37. "Isn't it easier to remember a new phone number?" asks Oram.

People have to believe that it is worthwhile. You have to set the stage so people can do quality work.

"As soon as you start dealing with concrete problems on a quantitative basis, you can see results right away. You can say, 'If I do this, it would save me this kind of money,' " says Oram. For instance, do you really need eight people at the meeting or can you conduct the meeting with only six? Do nine people really have to sign off on a purchase order?

"At some point in time, Total Quality Process task groups will become self-forming," says Oram. "I know of a case where a person approached his shop foreman and said, 'It takes 10 people a week to do this job; I think I have a way that would only take three people a couple of days.' This shop foreman was smart enough to say 'go ahead.' It ended up taking five people, but it worked. It took guts for that person to suggest a better way, and it took guts on the shop foreman's part to make that change."

That kind of attitude is exactly what it's going to take to make Total Quality Process work at Grumman.■

A Class Rollcall

The number of Grummanites participating in the Total Quality Process training sessions is growing.

Grumman President John O'Brien and top senior management attended the two-day session earlier this week.

Late last month, Aircraft Systems President Pete Oram and Data Systems President Bob Myers and their respective senior management teams also attended the sessions.

In all, there will be 30 problem solving work sessions and approximately 60 quality action teams formed. These teams will work on 60 different problems. Approximately 40 Grummanites will also be trained as facilitators by ODI. As Total Quality Process spreads throughout the company, these Grumman facilitators will conduct the Total Quality Process sessions and also train others to be facilitators.

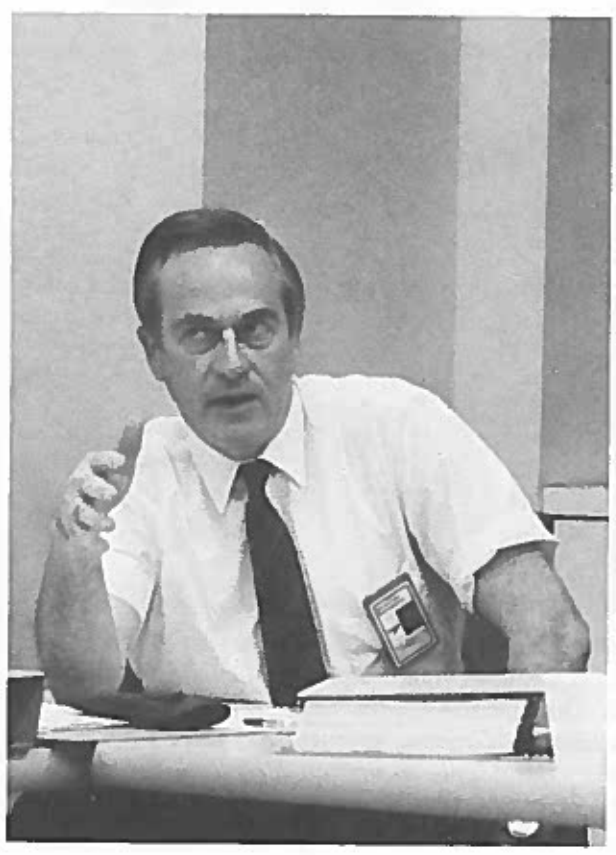
By the end of 1988, all divisions' senior management will have completed the Total Quality Process training.

The President's Council includes Grumman President John O'Brien, the three vice chairmen and all the division presidents.

The Grumman Advisory Board is responsible for the overall implementation of the Total Quality Process effort. The board reports to the President's Council.

Members of the Advisory Board are: Dean Cassell, Grumman Corporation vice president-Product Integrity and Environmental Protection who serves as the chairman of the Advisory Board; Sandy Jones, Grumman Corporation vice president-Public Affairs; Bob Bradshaw, Grumman Corporation vice president and secretary; Steve Dely, Grumman Corporation vice president and assistant to the president; Jake Bussolini Jr., Corporate Services vice president-Business Operations; and Pete Oram, Aircraft Systems president.

Ed Hantz is director of Total Quality Process; he reports directly to Dean Cassell.



A Lesson In Quality. *The Grumman Advisory Board is responsible for the overall implementation of the Total Quality Process effort. Board members include (at left) Ed Hantz, director of the Total Quality Process; and (above) Grumman Vice President and Secretary Bob Bradshaw (R) with Dave Dennen of ODI. (Photos by Jim Wagner)*

Grumman Gets Improved Marks After Security Inspection On L.I.

After the May security inspection of Grumman Long Island facilities, the company received a "much-improved" rating from the Defense Investigative Service (DIS).

That marks a dramatic turnaround from a year ago, when the DIS found numerous security violations at Grumman facilities.

"It's really a tribute to Grumman people that such rapid improvement has been made," says Harry Volz, director of Corporate Security. "I think we're all affected by the news from the outside about the terrible successes that foreign intelligence has made at obtaining U.S. defense secrets."

When the DIS gave Grumman bad marks in 1987, it cited improper storage of classified documents as the number-one problem. A few examples: the service found confidential documents in a binder stored in an unlocked cabinet. In another place, it found one page of a confidential document lying on a desk.

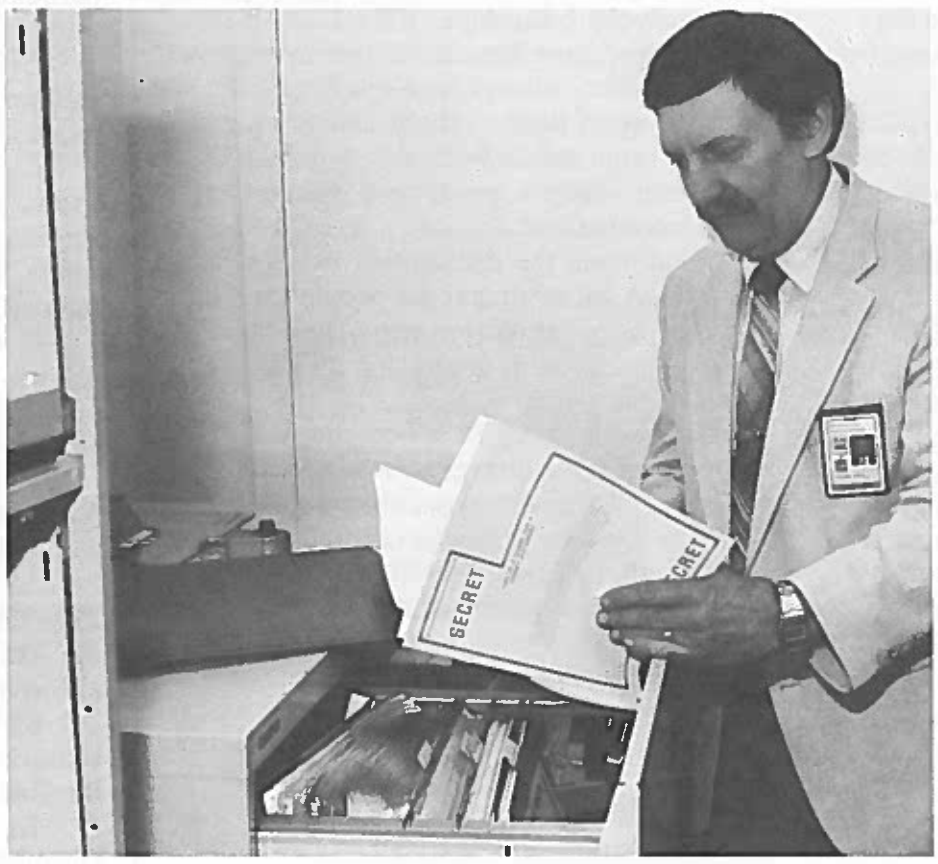
"The federal government's regulations regarding industrial security have multiplied," Volz says. "At the same time, the work force is constantly changing. So a continuing effort has to be made to ensure a high level of security awareness among employees."

He notes that after the Walker spy family scandal a few years ago, 60 new security regulations were proposed in Congress. Of those, 48 were approved and 43 put into effect thus far.

At the root of the problem, the DIS report said, was a lack of awareness about security procedures by Grumman managers and their people. Indeed, some people were confused about the need to secure confidential documents: they mistakenly thought that because they didn't need a "secret" clearance to gain access, such documents didn't have to be locked up. Not so.

"The DIS last year said we probably had the finest industrial security procedure — on paper," Volz says. "Problem was, there were too many instances where procedure wasn't being followed."

So, for the past year the Corporate Security department has expanded its educational efforts. It has also assigned two people to work full time as in-house security inspectors. Each day, these two Grummanites pick a Grumman plant to visit, checking to see that its classified documents are properly safeguarded.



Careful Scrutiny. *Mike Amodio, an in-house inspector for the Corporate Security Department, checks a cabinet for compliance with DOD regulations. (Photo by Bob Settles)*

The department patterned these self-inspections on the DIS. "The two inspectors went to a week-long training seminar for DIS people, to learn what they look for," says Dick McGuire, security manager.

Besides improperly stored documents, the DIS found unreported computer systems being used for classified work. This was a technicality: the computers were used properly by people with the correct clearances. But necessary paperwork had not been filed with the DIS.

So far, about 15,000 Grummanites on Long Island have seen Grumman's new educational video about industrial security. The video includes situations identified in last year's DIS review — such as a person wrongly carrying around the combination to a safe in his wallet. Doing so compromises security: the combination could fall into the wrong hands.

In addition, the department updated its "Security and You" booklet. This is issued to all Grummanites.

Grumman tightened its policy dealing with employees who violate security procedures. Now, generally there is a verbal warning first, then a written one. Violations are taken into account in salary reviews.

If a third infraction occurs, the policy stipulates mandatory suspension and/or dismissal. But depending on the infraction's severity, someone can be discharged at any time. Two people have been dismissed and there have been a handful of suspensions.

Grumman has also sponsored several lectures in headquarters about protecting U.S. security. These have featured guest speakers from the Federal Bureau of Investigation, the Central Intelligence Agency, and the Defense Department.

The intelligence threat includes not only America's adversaries. It includes friendly foreign nations, who want to obtain technological information for their own industries, and other U.S. companies.

"The transfer of technology, even unclassified, is a big issue," says Volz. "In the 1960s, there was a case of a Soviet agent trying to get information about the design of the F-14's wing box. That was an unclassified technology that they wanted. Today, the Soviet Foxbat aircraft has a folding wing, but it's still not as sophisticated as an F-14's."

"We don't want people to feel a siege mentality," says McGuire. "We want them to feel they have an obligation as employees of a government contractor to protect classified information. And we want them always to have that concern — not only at inspection time."

The good report notwithstanding, McGuire says certain issues demand attention. A nagging problem is keeping track of classified cabinets: when a person who "owns" one changes offices, the cabinet sometimes gets left behind for a person without clearance for the information it contains.

A problem facing any company with an industrial security program is the many rule-making bodies within the Federal government. Inevitably, the regulations conflict.

Grumman is working with the Aerospace Industries Association to standardize those rules.■

The Finer Points. *In Bethpage's System Test/Flight Integration lab, Marion Viselli works on a communications input/output unit for the E-2C on-board computer. Through the Closed Loop Aeronautical Management Program (CLAMP), Grumman refurbishes electronic assemblies for fleet E-2C's. The people in the lab also work on avionics for new aircraft. (Photo by Bob Settles)*

Grumman Planes To Star At July 16 Family Picnic

There must be a lot of kids who after seeing the movie *Top Gun* fantasized about what it would be like to be an F-14 pilot.

Well, come to this year's Grumman Family Picnic on July 16, and bring your camera. Your kids can have their picture taken in front of an F-14 Tomcat.

On display at the picnic this year will be an F-14, an EA-6B, an A-6 and possibly an E-2C. And the kids can ask as many questions as they want. Grumman flight crews will be there to answer them all.

Anthony Maldon of the Tool Maintenance and Control Department in Building 1 thinks his grandsons Michael and Bobby are going to have a lot of fun at the picnic. "What kid doesn't like airplanes?" says Maldon. "When I bring them pictures and patches of the planes, they run around school showing all their friends and bragging that their grandfather works for Grumman."

Lynn Schoenstein, a subcontracts administrator in Building 30, thinks it's a good opportunity to see the products up close. "Especially if you don't work where the planes are actually manufactured," says Schoenstein.

"Years ago the picnic was a main event at Grumman," says Tony Salamone of the Technical Services Department in Building 2. "I can't think of a better way to regenerate some of those feelings than by putting the Grumman products on display."

In addition to the aircraft display, everyone who buys a ticket this year will have a chance to win a $500 gift certificate for a local appliance store.

Tickets are available at all local Employee Services offices. They are $5 each and children under 12 are admitted free.

Traditional rides and races will also be at this year's picnic. Prizes will be awarded to the winners of the various field events. A new event will be added this year: a 20-yard dash for four- and five-year olds.

A magician and an animal act go on stage at the bandstand at 11:30 a.m. In between all the activities, the Grumman band will be belting out tunes.

Grumman has added corn on the cob to the picnic menu, which also includes hot dogs, soda, milk, beer and ice cream. The food counters will be open until 3 p.m.

Here are a few tips to make your day more enjoyable:

Arrive early. Although the picnic doesn't officially begin until the 10 a.m. flag raising ceremony, the grounds open at 8 a.m. Plan on arriving early to get a picnic table in a nice, shady spot.

Food and beverages. If you prefer to bring your own grill and food, don't forget charcoal, lighter fluid, and matches. It is probably a good idea to bring along a pitcher to carry drinks from the beverage booths back to your picnic site.

Don't forget your badge. One person in each car entering the picnic grounds must show a Grumman badge.

The rain date is July 17. If it looks like a rain day might be called, Grummanites can contact the following stations to see if the picnic has been rescheduled: WGSM (740 AM), 423-6740; WGBB (1240 AM), 955-WGBB; WBLI (FM 106.1), 732-6930; WNYG (1440 AM), 661-4000; WGLI (1290 AM), 669-1290; WLIM (1580 AM), 475-1580; WALK (FM 97.5), 475-5200. Information will also be available at 349-9400 or 369-2266.■

They're Back. *In 1980 Grummanites and their families enjoyed a first hand look at an F-14 during Grumman's Family Day in Calverton. At this year's Grumman Family Picnic on July 16, there will be an F-14, EA-6B, A-6 and possibly an E-2C on display.*

New Appointments

The following Grummanites recently received new assignments:

Aircraft Systems

Bethpage Operations: Mario Conforti, supervisor, Production-Nights.

Integrated Logistics Support: Raymond Bigus, manager, CLAMP/ROR, E-2.

Product Operations: Armand DeAngelis, program manager, V-22 Production Program.

Technical Operations: Herman Hugo, group leader, Systems Evaluation; Richard Basak, engineering specialist, Equipment Installation/Configuration; Carl Schoendorfer, project manager, GEMS Applications; Brian Gorin, engineering specialist, Optical Sensors; Yitzchak Traeger, group head, Aerodynamic Design and Analysis; George Poletti, technical specialist, Target Identification and Classification Technology; William J. Murray Jr., principal engineer, Electronic Warfare System Development; Elias Landau, engineering specialist, Systems Integration; Frank McCarthy, group leader, Thermodynamics.

Electronics Systems

Great River Operations: Kenneth Bryan, foreperson, Electrical Harness Fabrication; Anker Peterson, foreperson, Electrical Cable Fabrication; Joseph Congero Jr., foreperson, Mechanical Structural Finishes; Joseph Cook, foreperson, Mechanical Structure and Assembly; Ronald Alongi, foreperson, PCB Fabrication; John Hutcherson, foreperson, Manufacturing Technical Support; Vito D'Amico, assistant foreperson, Functional Test; Willie Johnson, manager, Manufacturing; Rosario DeLuca, manager, Manufacturing. ■

Enroll Now

Want to learn how to get more from your personal computer? Grumman Data Systems Institute is offering Long Islanders — both Grummanites and non-Grummanites — a $100 summer discount on its 32-hour personal computer seminar. The regular price is $595, but for the July 11 and August 8 sessions the price is only $495. This offer is good only for the classes that start on those two dates. For more information contact GDSI, (516) 364-2055.

Strike Up The Band

The Grumman Employee Band recently announced its 1988 Summer Concert Tour. All concerts begin at 8 p.m.

Wednesday, July 13
Bald Hill Cultural Park
Farmingville

Thursday, July 14
Bethpage Community Park

Friday, July 15
Stony Brook Village Green

Thursday, July 21
Bayshore Marina

Friday, July 29
Marina Park, Port Jefferson

Readership Survey

We don't want to do all the talking. We'd like to know what you think about the things you see in these pages. Your comments, suggestions and complaints are welcomed. Please take a few minutes and give us your opinions.

Article	Great	Good	Poor	Didn't Read
OV-1 Mohawk (P. 1)	☐	☐	☐	☐
Nuclear Accelerator (P. 2)	☐	☐	☐	☐
Fire Trucks (P. 3)	☐	☐	☐	☐
Total Quality Process (P. 4)	☐	☐	☐	☐
Security Review (P. 6)	☐	☐	☐	☐
Chairman's Letter (Back Cover)	☐	☐	☐	☐

Suggestions For Future Articles:.....

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☐ Retiree **Division**.....

Mail to: Grumman World, A22-GHQ
IIII Stewart Ave., Bethpage, N.Y. 11714

GrummanWorld
July 8, 1988

(Photo by Bob Seales)

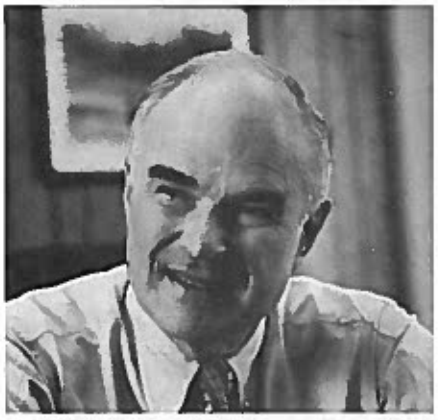
Metal Detective

Dr. Woody Wongwiwat, a senior quality engineer for Aircraft Systems' Quality Lab in Bethpage, uses a scanning electron microscope to analyze metal parts.

The microscope scans the part's surface with an electron beam. It can detect flaws such as fatigue fractures, cracking from weight overload, and corrosion. The electron beam's signal is transformed into a video signal and a picture of the part is displayed on a TV monitor. This lets the engineers clearly examine the problem. In addition, a Polaroid camera is hooked up to produce still photos if needed.

The microscope can handle parts as small as a needle to about three cubic inches in size. Magnifications range from 10 to 500,000 times the actual size.

A Letter From The Chairman



Grumman St. Augustine was started in 1980 with a handful of people and the conviction that turning old airplanes into new ones could be a most profitable business. Today, more than 1,300 people in that Florida city wear Grumman badges. But even as it continues to grow, the business parameters for the St. Augustine Division still have not been settled.

When St. Augustine was founded, we believed that foreign aircraft refurbishment would form the bulk of its business. While there have been some important international programs for St. Augustine — notably the A-4 for Malaysia — there have not been as many as we had anticipated. One reason is a downturn in the economies of many nations: they simply have not been able to afford to overhaul their planes. Another reason is U.S. policy: a St. Augustine refurbishment on a plane improves its daily performance enough to make our contracts matters for U.S. government consideration and approval.

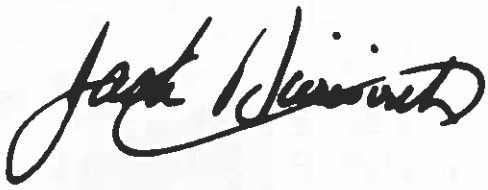
Work that might be acceptable at other firms in the aircraft rebuilding business would be considered substandard at St. Augustine. Just like their fellow Grummanites at other locations, the people at St. Augustine are dedicated to producing quality work. When they refurbish a plane, they do everything first class — from stripping off old paint to replacing old wires to checking electronically for stress cracks. This commitment to excellence has overqualified and out-priced St. Augustine in some refurbishing competitions. But St. Augustine has established itself as one of the best plane rebuilders in the business — it does quality work for a reasonable price. Just the reputation we want to earn and to have.

So it was of little surprise that when the U.S. government wanted to refurbish its aircraft it turned to St. Augustine. The government's perspective on aircraft life has changed. Budget cutbacks have made it necessary to get as many years as possible from each plane. St. Augustine is giving second life to many Navy airplanes — tearing them apart, and refurbishing them from the inside out. In fact, practically all of the division's work right now is from our own government.

Part of the reason that St. Augustine has been so successful is the steady support it has received at state, county and city levels. More than $6 million in state and federal funds have gone to develop the airport adjacent to St. Augustine. Florida has built excellent facilities and leased them back to us, and has even helped to train our people. This support has helped make St. Augustine a high quality, low cost resource for all of our customers.

Frankly, it always makes some Long Island people edgy to hear that — people outside *and* inside our company. They don't want to hear about any Grumman work being done off Long Island. But they fail to realize that St. Augustine — and Stuart, Benton Park, Glen Arm, Milledgeville, Houston, Salisbury, and all of our important manufacturing sites — is interdependent with our Long Island operations. Being able to move work around to where we can do it best enables us to avoid becoming too dependent on Long Island with all its problems and it keeps us competitive overall.

What is good for one of our divisions is good for all of them. Each one plays a special role in making our company successful — and St. Augustine is making a superb contribution to Grumman's stability and strength. I'm going to enjoy watching St. Augustine grow and define itself over the next few years.



John C. Bierwirth
Chairman

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